Although the preferred embodiments have been described in detail herein, it is obvious for those ordinarily skilled in the relevant art to design different modifications, addition, and substitutions within the spirit of the present invention, because these different modifications, addition, and substitutions fall into the scope of the present invention defined in the claims.

Claims

1. A hand-writing device for inputting characters, said device comprises a hand-writing board and characterized in that said hand-writing board comprises:
an input surface;

a guidance device, provided on said input surface along a predetermined track, and it limits the direction of the hand-writing input stroke during the input to guide the hand-writing to following said predetermined track; a plurality of switch elements provided on particular positions on said predetermined track, when a specific character is inputted by hand-writing, the triggered switch element among said plurality of switch elements will produce the corresponding output, and the combination of the outputs of said plurality of switch elements correspond to the inputted character.

2. A hand-writing input device according to claim 1, wherein said predetermined track is a pattern composed of a first plurality of lengths and a second plurality of lengths. Said first plurality of lengths includes the lengths between each two adjacent points of a first plurality of points (Pi) sequentially arranged on the closed curve; said second plurality of lengths is formed by the length starting from a point inside of said closed curve and ending at each of the second plurality of points (Pj) on said closed curve.

3. A hand-writing input device according to claim 2, wherein said first plurality of lengths includes six lengths (P1P2, P2P3, P3P4, P4P5, P5P6, and P6P1), which are formed by the curve between each two adjacent points of said first plurality of points (P1, P2, P3, P4, P5 and P6) sequentially arranged on said closed curve, while said second plurality of lengths includes six lengths (P0P1, P0P3, P0P4, P0P5, P0P6), which are formed by the length starting from a point (P0) inside of the closed curve and ending at each of the second plurality of points (P1, P2, P3, P4, P5 and P6).

4. A hand-writing input device according to claim 2, said first plurality of lengths includes six lengths (P1P2, P2P3, P3P4, P4P5, P5P6, and P6P1), which are formed by the curve between each two adjacent points of said first plurality of points (P1, P2, P3, P4, P5 and P6) sequentially arranged on said closed curve, while said second plurality of lengths includes two lengths (P0P1 and P0P4) which are formed by the lengthsstarting from a point (P0) inside of the closed curve and ending at each of said second plurality of points (P1 and P4).

5. A hand-writing input device according to claim 2, wherein said first plurality of lengths includes six lengths (P1P2, P2P3, P3P4, P4P5, P5P6, and P6P1), which are formed by the curve between each two adjacent points of said first plurality of points (P1, P2, P3, P4, P5 and P6) sequentially arranged on said closed curve, while said second plurality of lengths includes eight lengths (P0P1, P0P2, P0P23, P0P3, P0P4, P0P5, P0P56 and P0P6), which are formed by the length starting from a point (P0) inside of the closed curve and ending at each of the second plurality of points (P1, P2, P23, P3, P4, P5, P56 and P6).

6. A hand-writing input device according to any of claims 2-5, wherein the pattern formed by the first plurality of lengths and the second plurality of lengths are substantially center symmetrical.

7. A hand-writing input device according to any of claims 2-5, wherein the pattern formed by the first plurality of lengths and the second plurality of lengths are substantially axis symmetrical.

8. A hand-writing input device according to any of claims 2-7, wherein the closed curve formed by said first plurality of lengths are one from the group including rectangle and rectangle-like, ellipse and ellipse-like, or 8-shape and 8-shape-like.

9. A hand-writing input device according to any of claims 2-8, wherein the special locations of said plurality of switch elements are as follows: arranging a switch element on each of said first plurality of lengths, arranging a switch element on at least one of the two lengths (P1P0 and P0P4) in said second plurality of lengths, and arranging a switch element on each of the rest lengths.

10. A hand-writing input device according to any of claims 1-9, wherein said guidance device is a one selected from the groupcomprising visual guidance device composed of the visual track per se, touching guidance device composed of a recess with said switch element provided therein or /anda protrusion with said switch element provided thereon.

11. A hand-writing input device according to claim 10, wherein the cross-section of said recess type guidance device and the protrusion type guidance device are substantially trapezoid or semicircle.

12. A hand-writing input device according to any of claims 1-11, wherein said switch element is one selected from the groupcomprising resistive switch, electro-optical switch, mechanical switch and capacitive switch.

13. A hand-writing input device according to any of claims 1-12, wherein said input surface includes a touch sensitive screen.

14. A hand-writing input device according to claim 13, wherein said resistive switch is the keypad defined on said touch sensitive screen.

15. A hand-writing input device according to any of claims 1-14, wherein said input characters include numerals, letters and characters defined by the user.

16. A hand-writing input device according to any of claims 1-15, wherein the hand-writing input device further includes:
a micro-processor unit and a memory, said micro-processor unit obtains codes of characters corresponding to said switch signal combinations from the predetermined inquiry table stored in said memory according to the combination switch signals from said sensitive unit, and then output them.

17. A hand-writing input device according to claim 16, wherein the interfaces adopted by said output include serial interface, parallel communication interface, USB interface, infrared interface and blue-teeth interface.